OPEN FILE 3925

ORGANIC PETROLOGY, THERMAL MATURITY, AND ROCK-EVAL/TOC DATA FOR UPPER PALEOZOIC STRATA FROM SELECTED WELLS BETWEEN 60N AND 122W AND 123 30' SW, DISTRICT OF MACKENZIE

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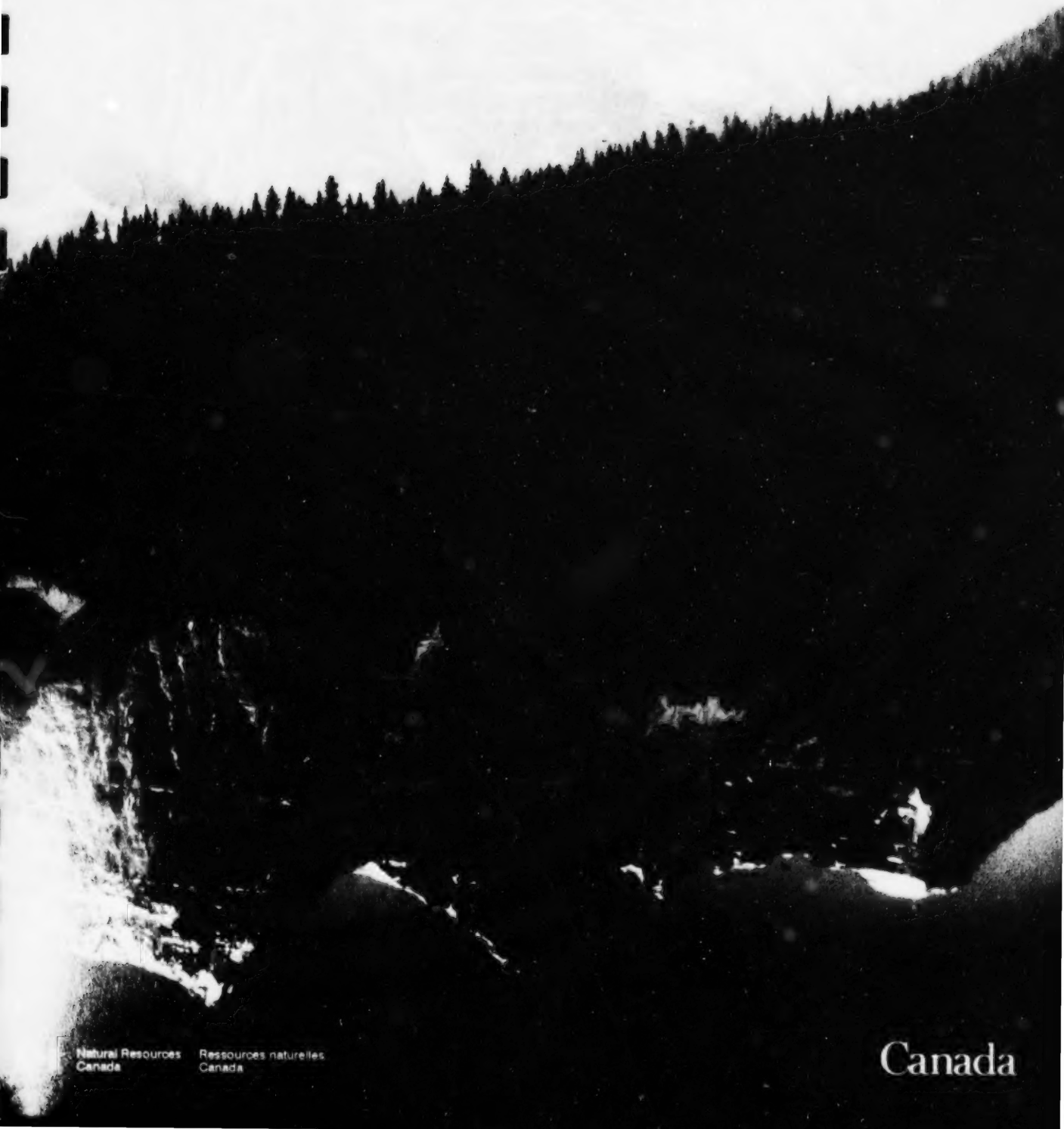

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ORGANIC PETROLOGY, THERMAL MATURITY, AND ROCK-EVAL/TOC DATA FOR UPPER PALEOZOIC STRATA FROM SELECTED WELLS BETWEEN 60° AND 61° N AND 122°W AND 123°30' SW, DISTRICT OF MACKENZIE

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August 2000

Organic petrology, thermal maturity and Rock-Eval/TOC data for upper Paleozoic strata from selected wells between 60°N and 61°N and 122°W and 123°30'W, southwest District of Mackenzie

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Approximately 110 core and 155 drill cuttings samples were collected from shale and siltstone intervals in Upper Devonian and Lower Carboniferous strata in the following well sections located between N60° and N61° and W122° and W123°30', southwest District of Mackenzie (Figure 1):

Imperial Island River No.1	N60°09'19" W121°08'16"
Dome *et al.* Trout Lake H-45	N60°44'20" W121°22'44"
Murphy *et al.* Muskeg River No.1	N60°43'38" W122°03'45"
Imperial Sun Arrowhead I-46	N60°45'37" W122°22'47"
Pan Am Home Signal Celibeta No. 7	N60°09'24" W122°37'44
Imperial Sun Netla C-07 (F-7)	N60°46'15" W122°46'15"
Texaco NFA Bovie Lake J-72	N60°11'39" W122°58'44"
Texaco Arrowhead N-2	N60°31'46" W123°01'18"
Amoco East Flett H-13	N60°32'28" W123°17'15"

The samples were collected as part of a study of the organic petrology, thermal maturity and Rock-Eval\TOC, hydrocarbon potential and thermal maturity of the Upper Devonian and Lower Carboniferous in the northern part of the Liard Basin and adjacent platform in the southern District of Mackenzie (Potter, 1998). Samples (100g) were hand-picked from washed cuttings or core (C) and are labeled according to the logged depth units and assigned GSCC numbers (Tables 1 and 2). The stratigraphic intervals sampled are indicated in Figure 2.

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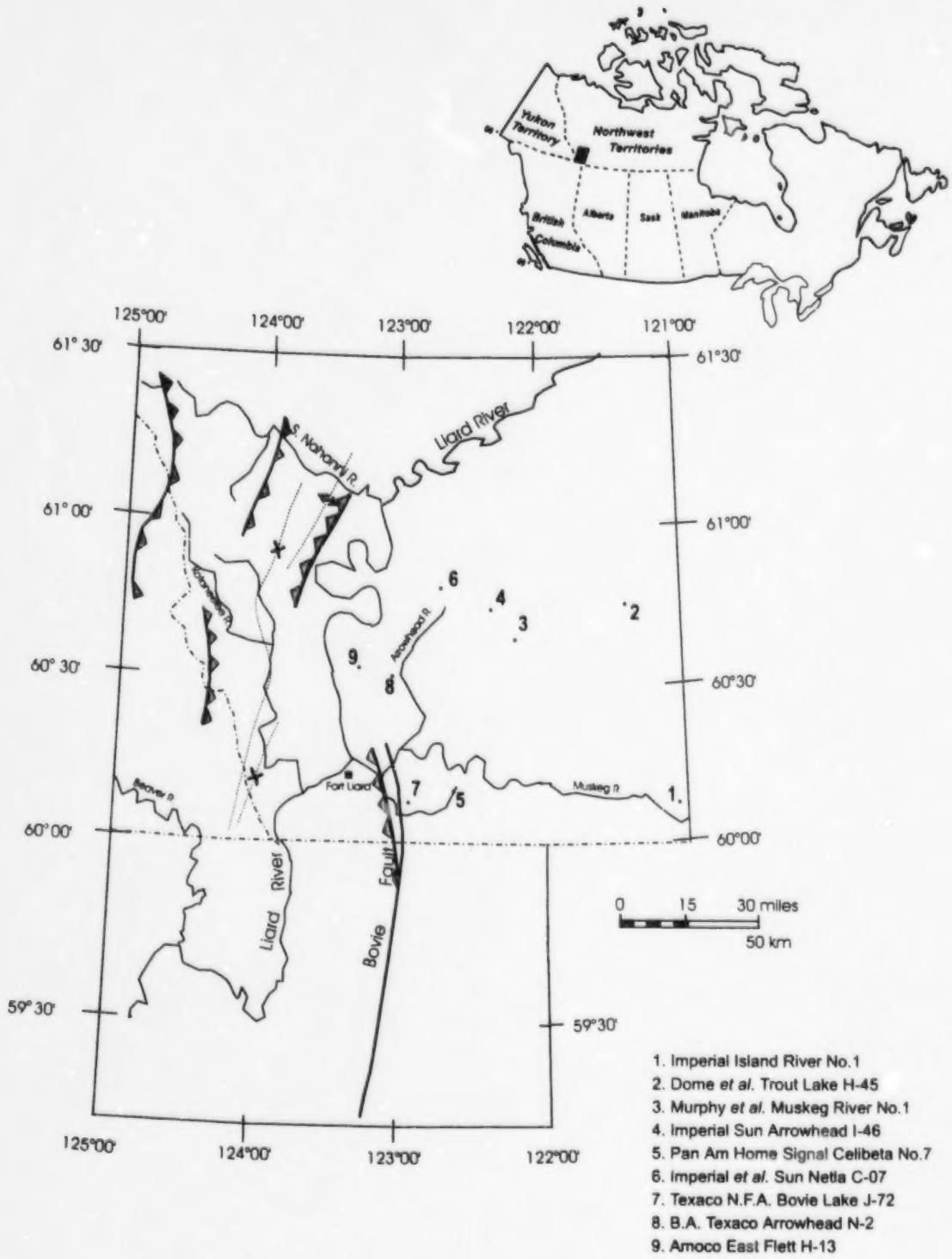

Figure 1. *Study area and sample location map.*

Table 1

Sample locations, GSC sample numbers and type of analyses performed

Sec #[1]	Well name	Location		Number of Samples[2]		GSC #	Type of Analysis carried out			
		latitude	longitude	Cuttings[2]	Cores[2]		PQ[3]	BRo	REv	TOC
1	Imperial Island River No.1	N60° 09' 19"	W121° 08' 16"	15 (13)	51 (32) + 41[4]	C186751	65 (?)	65	36	36
2	Dome *et al.* Trout Lake H-45	N60° 44' 20"	W121° 22' 44"	15 (14)		C186768	15	15	10	10
3	Murphy *et al.* Muskeg River No.1	N60° 43' 38"	W122° 03' 45"	18 (16)		C186767	18	18	18	18
4	Imperial Sun Arrowhead I-46	N60° 45' 37"	W122° 22' 47"	13 (10)	10 (8) + 9[3]	C186757	23	23	0	0
5	Pan Am Home Signal Celibeta No. 7	N60° 09' 24"	W122° 37' 44"	27 (25)		C186765	27	27	16	16
6	Imperial Sun Netla C-07 (F-7)	N60° 46' 15"	W122° 46' 15"	21 (17)		C186764	21	21	12	12
7	Texaco NFA Bovie Lake J-72	N60° 11' 39"	W122° 58' 44"	33 (31)	2	C186762	33	33	33	33
8	Texaco Arrowhead N-2	N60° 31' 46"	W123° 01' 18"	26 (23)		C186758	24	24	18	18
9	Amoco East Flett H-13	N60° 32' 28"	W123° 17' 15"	8 (6)		C186759	8	8	6	6

[1]section numbers used in Fig. 1

[2]number in column 3 is the total number of samples collected and analyzed for VRo and RockEval-TOC; number in parentheses indicates the number of Upper Devonian and Lower Carboniferous samples analysed

[3]P-Q = qualitative organic petrology; number in parentheses indicates samples for palynology

[4]indicates samples collected for CAI analysis

Table 2

Upper Devonian and Carboniferous stratigraphic intervals sampled

Sec. #[1]	Well name	M Dev[2]	Upper Devonian[2]								Lower Carboniferous[2]								Per K/F	Lr K
			M	FS	R K	T R	Te	U D	Ko	B R	Ex	Bf	Yo	Cl	Pr	Fl/ F	Go	M a		FSJ
1	Imperial Island River No.1		X	X	X	X	X		X		X	X								X
2	Dome *et al.* Trout Lake H-45		X	X	X				X		X	X								X
3	Murphy *et al.* Muskeg River No.1		X	X	X	X	X	X	X		X	X								X
4	Imperial Sun Arrowhead I-46	X	X	X	X	X		X			X	X								
5	Pan Am Home Signal Celibeta No. 7	X	X	X	X	X	X	X	X		X	X		X	X	X			X	X
6	Imperial Sun Netla C-07 (F-7)	X	X	X	X	X		X	X		X	X								
7	Texaco NFA Bovie Lake J-72		X	X		X	X	X	X		X	X		X	X	X		X	X	
8	Texaco Arrowhead N-2			X	X	X		X	X		X	X		X	X	X		X		X
9	Amoco East Flett H-13													X	X	X				

[1]see figure 1 for location map

[2]M=Muskwa Fm.; FS = Fort Simpson Fm.; Rk = Redknife Fm.; TR = Trout River Fm.; Te = Tetcho Fm.; UD = undifferentiated Upper Devonian; Ko = Kotcho Fm.; BR = Besa River Fm.; Ex = Exshaw Fm.; Bf = Banff Fm.; Yo = Yohin Fm.; Cl = Clausen Fm.; Pr = Prophet Fm.; Fl = Flett Fm.; F = Formation F (after Richards, 1989); Go = Golata Fm.; Ma = Mattson Fm.; Per = Permian; K = Kindle Fm.; F=Fantasque Fm.; L K = Lower Cretaceous; FSJ = Fort St. John Group

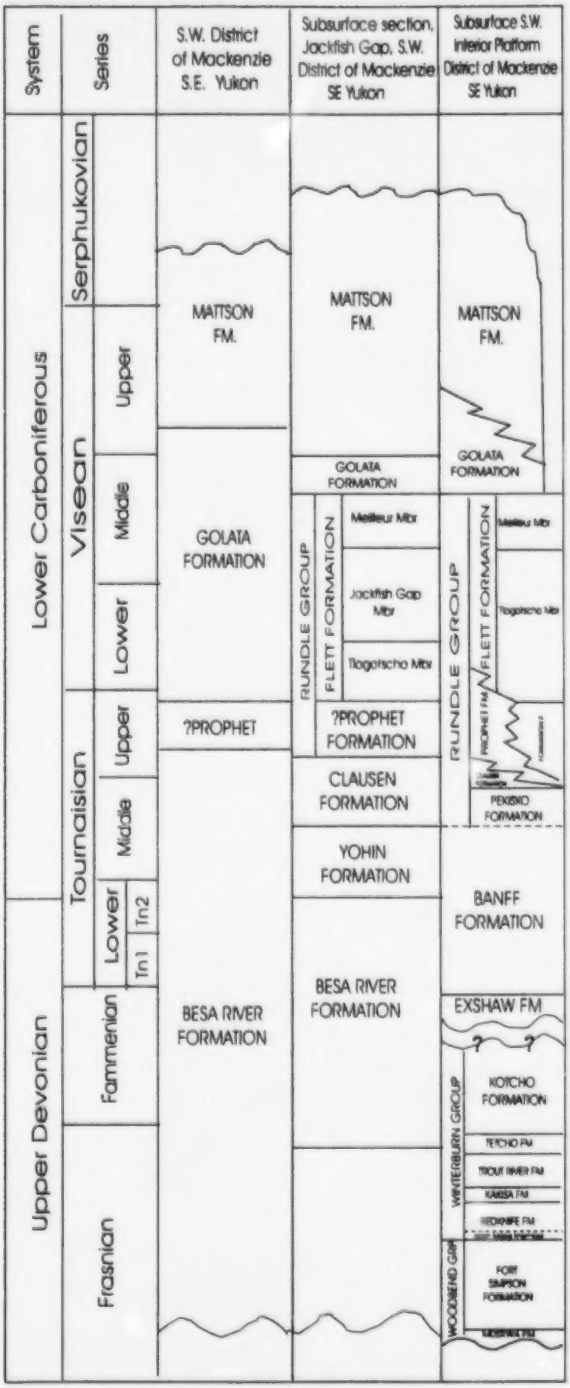

***Figure 2.** Stratigraphic column for study area; compiled from Richards (1989), Meijer-Drees (1989), Belyea and Maclaren (1961), and Torrie (1974).*

Rock-Eval /TOC analyses were carried out using standard procedures at GSC Calgary (Snowdon *et al.*, 1998) and the raw data are presented in Table 3. Organic petrology and thermal maturity was determined on polished particulate pellet samples using a Zeiss Universal (USMP) microscope-photometer with incident white and fluorescent light sources and x25 and x40 oil immersion objectives. Petrographic characterization of the dominant and subordinate organic components was done on a relative basis (Table 4) using the maceral (Sentfle *et al.*, 1993) and microbitumen (Potter 1998) classifications shown in the Appendix. Thermal maturity was determined using a fluorescence index (Potter, 1998) and microbitumen reflectance ($\%BR_o$, Table 5). A vitrinite reflectance equivalent value ($\%VR_o$) can be determined using the Type 3 or Type 4 microbitumen Ro data using formulae derived from Potter (1998) and Jacob (1985).

These data have also been reported in thermal modeling studies of the Liard Basin by Morrow *et al.* 1993 and in studies on the origin of middle Devonian reservoirs (Morrow & Potter, 1998).

Table 3
RockEval-TOC data

Section[1]	Depth[2]	Quantity[3]	Tmax[4]	S1[5]	S2[6]	S3[7]	PI[8]	S2/S3	P C[9]	TOC[10]	HI[11]	OI[12]
std	std	100.3	430	0.29	3.67	0.67	0.07	5.47	0.33	1.57	233	42
1	1993.5	100.3	440	0.28	2.84	0.38	0.09	7.42	0.25	2.01	140	18
1	1993.5	100.0	442	0.31	2.95	0.42	0.10	7.02	0.27	2.17	139	19
1	2134.2	100.2	438	0.15	0.55	0.19	0.21	2.89	0.05	1.29	42	14
1	2134.2	100.9	437	0.13	0.45	0.2	0.22	2.25	0.04	1.32	34	15
1	2310	101.1	366	0.00	0.00	0.00	-	-	0.00	0.21	0	0
1	2310	100.6	366	0.00	0.01	0.01	-	0.06	0.00	0.16	6	93
1	1994	100	442	0.31	2.95	0.42	0.10	7.02	0.27	2.17	135	19
1	1994	100.3	440	0.28	2.82	0.38	0.09	7.42	0.25	2.01	140	18
1	2134	100.9	437	0.13	0.45	0.20	0.22	2.25	0.04	1.32	34	15
1	2134	100.2	438	0.15	0.55	0.19	0.21	2.89	0.05	1.29	42	14
1	2310	101.1	-	0.00	0.00	0.00	-	-	0.00	0.21	0	0
1	2310	100.6	366	0.30	0.00	0.00	0.00	0.07	0.00	0.16	6	6
1	2797	100.3	-	0.03	0.00	0.33	1.00	0.00	0.00	0.20	0	165
1	2797	100.4	-	0.04	0.00	0.34	1.00	0.00	0.00	0.20	0	170
1	3012	101.7	438	0.06	0.22	0.03	0.21	7.33	0.02	0.51	43	5
1	3012	100.4	438	0.08	0.29	0.05	0.22	5.80	0.03	0.52	55	9
1	3288	100	445	0.28	1.79	0.20	0.14	8.95	0.17	0.99	180	20
1	3288	101.6	445	0.29	1.83	0.28	0.14	6.53	0.17	0.99	184	28
1	3465	101.2	444	9.11	66.27	2.45	0.12	27.04	6.28	15.56	425	15
1	3465	101.1	446	8.55	64.95	1.80	0.12	36.08	6.12	15.89	408	11
1	3470	100.3	446	6.93	60.13	0.83	0.10	72.44	5.58	13.94	431	5
1	3470	100.1	445	6.81	59.46	0.77	0.10	77.22	5.52	13.81	430	5
1	3486	99.8	373	0.05	0.06	0.46	0.50	0.13	0.00	0.35	17	131
1	std	102.4	430	0.25	3.50	0.57	0.07	6.14	0.31	1.61	217	35
1	3486	100	380	0.04	0.02	0.47	0.67	0.04	0.00	0.34	5	138
1	4098	99.3	451	0.57	2.53	0.63	0.18	4.01	0.25	1.32	191	47
1	4098	100.5	451	0.51	2.28	0.42	0.18	5.42	0.23	1.30	175	32
1	4426	100.5	-	0.03	0.03	0.24	0.50	0.12	0.00	0.16	18	150
1	4426	102.2	442	0.03	-	0.34	0.37	0.17	0.00	0.19	31	178
1	4818	98.7	-	0.02	0.01	0.02	1.00	0.50	0.00	0.29	3	6
1	4818	102.7	-	0.01	0.01	0.04	0.50	0.25	0.00	0.31	3	12
1	5409	101	-	0.00	0.00	0.09	-	0.00	0.00	0.23	0	39
1	5409	102	-	0.01	0.00	0.19	-	0.00	0.00	0.23	0	82
1	5418	100.9	407	0.00	0.02	0.00	0.00	-	0.00	0.29	6	0
1	5418	102.3	-	0.00	0.00	0.04	-	0.00	0.00	0.31	0	12
1	5477	100.4	-	0.01	0.00	0.00	-	-	0.00	0.26	0	0
1	5477	100.4	-	0.00	0.00	0.01	-	0.00	0.00	0.27	0	3
1	5590	100	-	0.18	0.07	0.11	0.75	0.63	0.02	0.31	22	35
1	5590	100	377	0.17	0.03	0.10	0.85	0.30	0.01	0.31	9	32
1	5899	103.9	362	0.02	0.03	0.09	0.50	0.33	0.00	0.15	20	60
1	5899	102	329	0.02	0.05	0.07	0.33	0.71	0.00	0.13	38	53
1	6240	100.5	339	0.00	0.01	0.15	-	0.06	0.00	0.16	6	93
1	6240	100.1	-	0.01	0.00	0.13	-	0.00	0.00	0.10	6	130
1	6814	99.9	386	0.00	0.02	0.00	0.00	-	0.00	0.48	4	0
1	6814	99.9	385	0.00	0.03	0.02	0.00	1.50	0.00	0.48	6	4
1	6931	103.3	-	0.06	0.00	0.05	1.00	0.00	0.00	0.39	0	12
1	6931	101.3	-	0.04	0.00	0.09	1.00	0.00	0.00	0.43	0	20
1	7247	99.9	309	0.11	0.06	0.12	0.69	0.50	0.01	0.48	12	25
1	7247	99.7	336	0.12	0.07	0.16	0.67	0.43	0.01	0.53	13	30
1	7260	100.8	357	0.12	0.05	0.45	0.75	0.11	0.01	0.21	23	214
1	7278	100.4	-	0.05	0.00	0.06	1.00	0.00	0.00	0.33	0	18

Table 3 (cont.)
RockEval-TOC data

Section[1]	Depth[2]	Quantity[3]	Tmax[4]	S1[5]	S2[6]	S3[7]	PI[8]	S2/S3	P C[9]	TOC[10]	HI[11]	OI[12]
1	7278	100.1	-	0.04	0.00	0.06	1.00	0.00	0.00	0.33	0	18
1	7290	100.1	-	0.08	0.00	0.20	1.00	0.00	0.00	0.10	0	
1	7290	100.2	-	0.11	0.00	0.20	1.00	0.00	0.00	0.10	0	200
1	7297	100.5	369	0.22	0.15	0.33	0.61	0.45	0.03	1.97	7	16
1	7313	:99.9	-	0.01	0.00	0.03	-	0.00	0.00	0.59	0	5
1	7313	100.1	453	0.02	0.04	0.02	0.33	2.00	0.00	0.64	6	3
1	7323	101.4	-	0.08	0.00	0.05	1.00	0.00	0.00	0.12	0	41
1	7323	100.6	-	0.09	0.00	0.04	1.00	0.00	0.00	0.08	0	50
1	7329	100.2	-	0.02	0.03	0.06	0.50	0.50	0.00	0.09	33	66
1	7347	99.9	348	0.10	0.04	0.10	0.71	0.40	0.01	0.12	33	83
1	7347	100	379	0.28	0.04	0.18	0.87	0.22	0.02	0.23	17	78
1	7402	100.9	-	0.01	0.00	0.18	-	0.00	0.00	0.44	0	40
1	7402	98.2	327	0.04	0.09	0.17	0.33	0.52	0.01	0.44	20	38
1	7733	100	326	0.06	0.03	0.07	0.75	0.42	0.00	0.12	25	58
1	7733	101	-	0.04	0.01	0.13	1.00	0.07	0.00	0.13	7	100
1	7755	103.9	-	0.00	0.00	0.09	-	0.00	0.00	0.14	0	64
1	7755	105.1	-	0.00	0.00	0.12	-	0.00	0.00	0.13	0	92
1	8000	102.2	-	0.01	0.00	0.22	-	0.00	0.00	0.29	0	75
1	8000	100	391	0.03	0.02	0.23	0.75	0.08	0.00	0.26	7	88
std	std	100	434	0.30	4.02	0.65	0.07	6.18	0.36	1.50	268	43
2	STD	100.8	440	1.20	11.37	0.43	0.10	26.44	1.04	4.85	234	8
2	2101	100	432	0.14	0.48	0.12	0.23	4.00	0.05	0.33	145	36
2	2101	102.2	429	0.14	0.68	0.10	0.17	6.80	0.06	0.33	206	30
2	2561	100.3	432	0.07	0.10	0.08	0.44	1.25	0.01	0.14	71	57
2	2561	100.3	428	0.06	0.08	0.12	0.43	0.66	0.01	0.13	61	92
2	2791	100.7	428	0.06	0.16	0.10	0.27	1.60	0.01	0.24	66	41
2	2791	100.3	427	0.06	0.20	0.09	0.23	2.22	0.02	0.24	83	37
2	3011	100.3	457	0.06	0.09	0.06	0.43	1.50	0.01	0.20	45	30
2	3011	100.6	414	0.06	0.09	0.06	0.43	1.50	0.01	0.20	45	30
2	3431	100.9	375	0.05	0.06	0.06	0.50	1.00	0.00	0.19	31	31
2	3431	100.4	387	0.06	0.07	0.07	0.50	1.00	0.01	0.21	33	33
2	3861	102	380	0.03	0.02	0.12	0.75	0.16	0.00	0.12	16	100
2	3861	100.1	330	0.03	0.02	0.13	0.75	0.15	0.00	0.13	15	100
2	4301	100.7	308	0.04	0.02	0.25	0.67	0.08	0.00	0.11	18	227
2	4301	101.5	-	0.04	0.01	0.28	1.00	0.03	0.00	0.11	9	254
2	4621	102.8	404	0.07	0.07	0.10	0.50	0.70	0.01	0.13	53	76
2	4621	100.2	410	0.06	0.05	0.10	0.60	0.50	0.00	0.13	38	76
2	4821	101.2	355	0.03	0.03	0.20	0.50	0.15	0.00	0.11	27	181
2	4821	102.1	407	0.03	0.04	0.19	0.50	0.21	0.00	0.11	36	172
2	4881	101.2	477	0.41	0.69	0.07	0.37	9.85	0.09	1.65	41	4
2	4881	100.5	476	0.40	0.68	0.06	0.37	11.33	0.09	1.68	40	3
2	STD	100.6	440	1.26	11.58	0.45	0.10	25.73	1.07	4.89	236	9
5	STD	101.8	418	0.06	1.16	1.18	0.05	0.98	0.10	2.56	45	46
5	STD	100	419	0.08	1.18	1.43	0.06	0.82	0.10	2.58	45	55
5	921	100.3	433	0.05	0.85	0.94	0.06	0.90	0.07	1.82	46	51
5	1031	102.2	432	0.07	1.21	0.87	0.05	1.39	0.10	1.72	70	50
5	1911	100.8	436	0.10	2.28	1.21	0.04	1.88	0.19	2.08	109	58
5	1971	102.3	442	0.03	0.21	0.72	0.12	0.29	0.02	0.93	22	77
5	2910	100.7	432	0.00	0.07	0.24	0.00	0.29	0.00	0.25	28	96
5	3310	100.8	432	0.04	0.38	0.57	0.10	0.66	0.03	0.95	40	60
5	3641	100.5	447	0.03	0.22	0.41	0.12	0.53	0.02	0.33	66	124
5	3641	100.9	439	0.04	0.34	0.29	0.11	1.17	0.03	0.36	94	80

Table 3 (cont.)
RockEval-TOC data

Section[1]	Depth[2]	Quantity[3]	Tmax[4]	S1[5]	S2[6]	S3[7]	PI[8]	S2/S3	P C[9]	TOC[10]	HI[11]	OI[12]
5	3941	101.0	443	0.07	0.45	0.54	0.13	0.83	0.04	0.66	68	81
5	3941	100.1	437	0.08	0.65	0.44	0.11	1.47	0.06	0.70	92	62
5	4310	102.6	451	0.02	0.17	0.32	0.11	0.53	0.01	0.29	58	110
5	4310	100.9	440	0.03	0.23	0.21	0.12	1.09	0.02	0.25	92	84
5	4310	101.6	440	0.07	0.36	0.20	0.17	1.80	0.03	0.46	78	43
5	4490	100.2	461	0.11	0.29	0.43	0.27	0.67	0.03	0.66	43	65
5	STD	101.5	414	0.05	1.11	1.37	0.04	0.81	0.09	0.04	0.81	0.09
5	4491	100.7	448	0.08	0.28	0.37	0.22	0.75	0.03	0.62	45	59
5	4631	101.6	455	0.02	0.09	0.24	0.20	0.37	0.00	0.26	34	92
5	4631	100.6	444	0.03	0.24	0.20	0.12	1.20	0.02	0.32	75	62
5	4921	100.2	373	0.01	0.03	0.03	0.25	1.00	0.00	0.12	25	25
5	4921	100.4	-	0.00	0.00	0.07	0.00	0.00	0.00	0.15	0	46
5	5191	100.4	429	0.01	0.05	0.06	0.17	0.83	0.00	0.25	20	24
5	5191	102.6	448	0.03	0.24	0.09	0.12	2.66	0.02	0.29	82	31
5	5441	101.9	457	0.02	0.09	0.06	0.20	1.50	0.00	0.27	33	22
5	5441	100.8	449	0.03	0.15	0.12	0.17	1.25	0.01	0.26	57	46
5	5761	100.2	461	0.06	0.14	0.08	0.30	1.75	0.01	0.32	43	25
5	5761	100	458	0.08	0.22	0.19	0.27	1.15	0.02	0.44	50	43
5	6121	100	363	0.01	0.05	0.00	0.17	0.00	0.00	0.17	29	0
5	6121	101.5	-	0.00	0.00	0.05	0.00	0.00	0.00	0.18	0	27
5	6371	100.6	-	0.00	0.01	0.00	0.00	0.00	0.00	0.13	7	0
5	6371	102.6	-	0.00	0.00	0.05	0.00	0.00	0.00	0.13	0	38
5	6721	100.7	379	0.00	0.01	0.00	0.00	0.00	0.00	0.14	7	0
5	6721	100.7	319	0.00	0.02	0.07	0.00	0.28	0.00	0.17	11	41
5	7041	100.9	405	0.05	0.02	0.00	0.83	0.00	0.00	0.78	2	0
5	7041	103.3	420	0.07	0.03	0.15	0.70	0.20	0.00	0.88	3	17
5	STD	100	413	0.08	1.24	1.38	0.06	0.89	0.11	2.76	44	50
5	STD	100.5	416	0.08	1.32	1.33	0.06	0.99	0.11	2.69	49	49
6	9108std	100.8	412	0.13	1.4	0.49	0.09	2.85	0.12	2.55	54	19
6	611	100.9	434	0.08	1.61	0.58	0.05	2.77	0.14	3.13	51	18
6	1941	103.6	443	0.06	1.33	0.2	0.04	6.65	0.11	1.14	116	17
6	2001	102.0	443	0.1	1.56	0.23	0.06	6.78	0.13	1.42	109	16
6	2251	100.6	442	0.08	1.45	0.15	0.05	9.66	0.12	1.30	111	11
6	2881	68.9	442	0.04	0.94	0.14	0.04	6.71	0.08	1.28	73	10
6	3411	101.2	435	0.12	1.11	0.25	0.10	4.44	0.10	1.40	79	17
6	4111	102.8	433	0.05	0.46	0.15	0.10	3.06	0.04	0.77	59	19
6	4500	103.2	440	0.03	0.07	0.02	0.30	3.50	0.00	0.33	21	6
6	4800	101.6	-	0.02	0.00	0.00	1.00	0.00	0.00	0.28	0	0
6	5161	100.4	358	0.01	0.04	0.00	0.25	0.00	0.00	0.32	12	0
6	5951	101.9	-	0.01	0.00	0.00	0.00	0.00	0.00	0.35	0.00	0
6	6290	100.7	464	0.25	0.05	0.19	0.83	0.26	0.02	2.63	1	7
6	9108std	100.2	412	0.12	1.34	0.51	0.08	2.62	0.12	2.55	52	20
7	741	100.5	434	5.55	3.27	0.48	0.63	6.81	0.73	1.66	196	28
7	741	101.4	436	5.58	3.78	0.40	0.60	9.45	0.78	1.68	225	23
7	1251	101.1	431	6.62	1.63	0.67	0.80	2.43	0.68	1.60	101	41
7	1251	101.9	433	6.75	1.89	0.67	0.78	2.82	0.72	1.64	115	40
7	2651	100.8	434	1.41	1.24	0.39	0.53	3.17	0.22	0.57	217	68
7	2651	100.7	432	1.38	1.18	0.40	0.54	2.95	0.21	0.57	207	70
7	2921	100.7	440	3.11	1.60	0.60	0.66	2.66	0.39	0.87	183	68
7	2921	100.5	437	3.20	1.67	0.52	0.66	3.21	0.40	0.88	189	59
7	3271	101.5	433	5.77	1.84	0.60	0.76	3.06	0.63	1.02	180	58
7	3271	101.1	437	5.75	2.20	0.53	0.72	4.15	0.66	1.03	213	51

Table 3 (cont.)
RockEval-TOC data

Section[1]	Depth[2]	Quantity[3]	Tmax[4]	S1[5]	S2[6]	S3[7]	PI[8]	S2/S3	P C[9]	TOC[10]	HI[11]	OI[12]
7	3381	102.7	439	6.64	4.33	0.41	0.61	10.56	0.91	1.66	260	24
7	3631	100.7	439	7.60	3.14	0.63	0.71	4.98	0.89	1.72	182	36
7	3921	101.3	440	9.27	3.54	0.72	0.72	4.91	1.06	2.00	177	36
7	3921	100.4	440	9.56	3.92	0.65	0.71	6.03	1.12	2.04	192	31
7	STD	101.3	415	0.06	1.04	1.42	0.05	0.73	0.09	2.59	40	54
7	4321	100.9	441	8.88	4.71	0.65	0.65	7.24	1.13	2.15	219	30
7	4321	100.6	444	9.10	4.69	0.52	0.66	9.01	1.14	2.12	221	24
7	4821	101.1	364	8.38	0.90	0.87	0.90	1.03	0.77	1.01	89	86
7	4821	101.3	367	8.56	1.11	0.86	0.89	1.29	0.80	1.02	108	84
7	5251	101.3	400	7.64	1.44	0.75	0.84	1.92	0.75	1.31	109	57
7	5251	100.4	387	7.62	1.50	0.65	0.84	2.30	0.76	1.34	111	48
7	5401	100.3	448	4.51	6.79	0.54	0.68	12.57	1.77	5.92	114	9
7	5401	100.7	449	4.89	7.13	0.56	0.68	12.73	1.83	5.93	120	9
7	5661	102.8	372	8.38	1.59	0.61	0.84	2.60	0.83	1.38	115	44
7	5661	100.7	373	8.52	1.67	0.57	0.84	2.92	0.84	1.37	121	41
7	STD	100	413	0.08	1.21	1.27	0.06	0.95	0.10	2.74	44	46
7	5831	100.7	368	8.30	1.55	0.58	0.84	2.67	0.82	1.08	143	53
7	5831	102.4	369	8.16	1.49	0.58	0.85	2.56	0.80	1.06	140	54
7	6391	102.1	367	6.66	1.16	0.51	0.85	2.27	0.65	0.91	127	56
7	6391	101.6	367	6.71	0.93	0.59	0.88	1.57	0.63	0.91	102	64
7	6931	103.2	375	8.43	1.63	0.62	0.84	2.62	0.83	1.08	150	57
7	6931	101.9	376	8.28	1.76	0.60	0.82	2.93	0.83	1.10	160	54
7	7291	100.9	378	6.62	1.39	0.55	0.83	2.52	0.66	0.91	152	60
7	7291	100.3	376	6.73	1.49	0.57	0.82	2.61	0.68	0.92	161	61
7	7681	100	379	6.50	1.57	0.63	0.81	2.49	0.67	0.93	168	67
7	7681	102.9	380	6.62	1.58	0.59	0.81	2.67	0.68	0.93	169	63
7	8841	100.2	385	6.60	1.94	0.54	0.77	3.59	0.71	1.01	192	53
7	8841	100.7	386	6.75	2.01	0.55	0.77	3.65	0.73	1.03	195	53
7	9271	101.5	378	5.28	1.40	0.52	0.79	2.69	0.55	0.80	175	65
7	9271	100.3	377	5.34	1.27	0.52	0.81	2.44	0.55	0.80	158	65
7	9451	101.6	421	8.07	2.75	0.63	0.75	4.36	0.90	1.75	157	36
7	9451	100.8	405	7.83	2.95	0.57	0.73	5.17	0.89	1.73	170	32
7	9531	100.6	415	6.54	1.44	0.66	0.82	2.18	0.66	3.03	47	21
7	9531	100.9	411	6.66	1.48	0.66	0.82	2.24	0.67	3.09	47	21
7	9598	100.2	396	0.10	0.19	0.16	0.36	1.18	0.02	1.94	9	8
7	9598	100.9	356	0.07	0.08	0.20	0.50	0.40	0.01	2.06	3	9
7	STD	100	413	0.08	1.16	1.29	0.06	0.89	0.10	2.73	42	47
8	STD	101.9	444	1.18	11.90	0.96	0.09	12.39	1.09	5.29	224	18
8	2800	102.1	430	0.30	0.27	0.26	0.54	1.03	0.04	0.18	150	144
8	2800	101	417	0.31	0.29	0.24	0.52	1.20	0.05	0.18	161	133
8	3240	100.6	394	0.19	0.18	0.19	0.53	0.94	0.03	0.19	94	100
8	3240	101	395	0.19	0.19	0.26	0.50	0.73	0.03	0.20	95	130
8	3500	100.5	435	0.21	0.27	0.34	0.44	0.79	0.04	0.20	135	170
8	3500	101.2	439	0.19	0.30	0.36	0.40	0.83	0.04	0.21	142	171
8	4000	100.3	446	0.19	0.18	0.21	0.53	0.85	0.03	0.17	105	123
8	4000	100.4	442	0.18	0.17	0.19	0.53	0.89	0.02	0.17	100	111
8	4280	101.9	348	1.56	1.40	1.17	0.53	1.19	0.24	0.53	264	220
8	4280	101.2	351	1.55	1.46	1.12	0.52	1.30	0.25	0.53	275	211
8	4440	101.7	452	1.01	2.55	0.56	0.28	4.55	0.29	1.48	172	37
8	4440	101.9	452	1.01	2.60	0.52	0.28	5.00	0.30	1.51	172	34
8	4450	100.3	448	1.84	4.33	0.61	0.30	7.09	0.51	2.49	173	24
8	4450	100.2	449	1.83	4.55	0.58	0.29	7.84	0.53	2.53	179	22

Table 3 (cont.)
RockEval-TOC data

Section[1]	Depth[2]	Quantity[3]	Tmax[4]	S1[5]	S2[6]	S3[7]	PI[8]	S2/S3	P C[9]	TOC[10]	HI[11]	OI[12]
8	4630	100.8	453	2.20	3.89	0.70	0.36	5.55	0.50	2.18	178	32
8	4630	106	451	2.17	3.74	0.66	0.37	5.66	0.49	2.20	170	30
8	4640	100.4	452	3.49	8.18	0.66	0.30	12.39	0.97	4.27	191	15
8	4640	100.1	453	3.37	7.87	0.80	0.30	9.83	0.93	4.18	188	19
8	4900	100.8	357	0.13	0.10	0.17	0.59	0.58	0.01	0.15	66	113
8	4900	100.8	421	0.15	0.11	0.25	0.58	0.44	0.02	0.15	73	166
8	5200	101.4	-	0.05	0.01	0.06	0.83	0.16	0.00	0.09	11	66
8	5200	100.8	319	0.06	0.03	0.08	0.75	0.37	0.00	0.09	33	88
8	5490	102.4	313	0.09	0.05	0.12	0.64	0.41	0.01	0.15	33	80
8	5490	101.4	-	0.09	0.06	0.12	0.64	0.50	0.01	0.15	40	80
8	5830	101.3		0.28	0.16	0.13	0.64	1.23	0.03	0.42	38	30
8	5830	100.7	379	0.28	0.21	0.13	0.58	1.61	0.04	0.43	48	30
8	6240	102.7	348	0.74	0.41	0.29	0.65	1.41	0.09	0.25	164	116
8	6240	100.8	344	0.68	0.33	0.29	0.68	1.13	0.08	0.25	132	116
8	6590	100.5	337	0.40	0.12	0.12	0.77	1.00	0.04	0.17	70	70
8	6590	100.4	344	0.38	0.10	0.15	0.79	0.66	0.04	0.18	55	83
8	7000	101.3	349	0.30	0.16	0.18	0.65	0.88	0.03	0.24	66	75
8	7000	101.1	345	0.33	0.17	0.19	0.66	0.89	0.04	0.22	77	86
8	7500	100.6	348	0.30	0.19	0.22	0.62	0.86	0.04	0.24	79	91
8	7500	102	352	0.30	0.17	0.30	0.65	0.56	0.03	0.24	70	125
8	8100	101.5	306	0.15	0.08	0.12	0.68	0.66	0.01	0.19	42	63
8	8100	101	348	0.15	0.11	0.13	0.58	0.84	0.02	0.21	52	61
8	STD	102.2	422	1.37	12.16	0.71	0.10	17.12	1.12	5.12	237	13
9	2900	100.4	428	0.12	0.30	0.12	0.29	2.50	0.03	0.45	66	26
9	2900	100.6	427	0.11	0.27	0.14	0.29	1.92	0.03	0.45	60	31
9	2770	100.9	429	0.09	0.33	0.09	0.21	3.66	0.03	0.49	67	18
9	2770	101.7	430	0.10	0.41	0.09	0.20	4.55	0.04	0.48	85	18
9	2440	101.3	433	0.06	0.44	0.08	0.12	5.50	0.04	0.54	81	14
9	2440	101.2	432	0.09	0.55	0.16	0.14	3.43	0.05	0.55	100	29
9	1850	100.9	431	0.05	0.18	0.19	0.23	0.94	0.01	0.48	37	39
9	1850	101.3	431	0.07	0.22	0.17	0.25	1.29	0.02	0.49	44	34
9	1000	100.0	436	0.42	2.19	0.82	0.16	2.67	0.21	1.78	123	46
9	1000	100.8	435	0.39	2.11	0.84	0.16	2.51	0.20	1.76	119	47
9	650	101.6	435	0.17	1.12	0.32	0.13	3.50	0.10	1.35	82	23
9	650	100.7	434	0.16	1.18	0.35	0.12	3.37	0.11	1.38	85	25
9	STD	100.0	442	1.27	13.03	0.62	0.09	21.01	1.19	5.23	249	11

[1]sections as per Figure 1
[2]below KB
[3]mg
[4]Tmax - temperature (°C) at the top of the S2 peak
[5]S1 - hydrocarbons evoloved at 300°C (mg hydrocarbons/g rock)
[6]S2 - hydrocarbons evoloved during heat at 25°C/min between 300°C and 600°C (mg hydrocarbons/g rock)
[7]S3 - organic carbon dioxide evoloved at 300°C and up to 390°C (mg CO2/g rock)
[8]PI - Production Index = S1/S1+S2
[9]pyrolitic carbon
[10]HI - Hydrogen Index = 100 x S2/TOC
[11]TOC - Total Organic Carbon as per cent by wieght of the whole rock
[12]OI - Oxygen Index = 100 x S3/TOC

Table 4
Organic petrographic composition

Sample no.[1,2]	Sampling interval[3]		Stratigraphic interval	Lithology[4]	Dominant maceral	Minor component
	ft	m				
Section 1 Imperial Island River No.1 N60 09' 29" W121 08' 16"						
C186751-1994	994C	607.77	Cretaceous	4	matrix bituminite, liptodetrinite, alginite, micro-alginite	vitrinite, inertinite,?nostocopsis, resinite
2134	2134C	650.44	Banff	5	alginite-bituminite	vitrinite-like, micro-alginite, ?trilete spore
2140	2140C	652.27	Banff	5		
2310	2310C	704.08	Banff	5	medium Ro bitumen	
2456	2456C	748.59	Banff	5	bituminites, liptodetrinite	sporinite (reworked)
2747	2747C	837.28	Banff	3/4	bituminite, sporinite (thick-walled crassispores) inertinite	vitrinite (bimacerite), liptodetrinite, bitumen
2760	2760C	841.24	Banff	2	bituminite strings, liptodetrinite, sporinite (fresh & rew)	vitrinite & inertinite, fish scales & calc. nannofossils
3012	3012C	918.06	Banff	5	liptodetrinite, bituminite stringers, sporinite	micro-alginite, vitrinite (reworked)
3275	3275C	998.22	Banff	5	matrix bituminite, bedding-//l bituminite, alginite, liptodetrinite	faunal inertinite, medium Ro bitumen
3288	3288C	1002.18	Banff	3/4	matrix bituminite. liptodetrinite, alginite	medium Ro bitumen, faunal inertinite
3465	3465C	1056.13	Exshaw	4	matrix bituminite, alginite, low & medium Ro bitumens	faunal inertinite,pellets, micro-alginite (acritarchs)
3470	3470		Exshaw			
3486	3486C	1057.65	Kotcho	2-d	bedding-//l bituminite, liptodetrinite	alginite,?faunal inertinite, low & medium Ro bitumens
3797	3797-3806C	1157.32-1160.07	Kotcho	2	bituminite, medium & low Ro bitumens	liptodetrinite, alginite, faunal inertintie
4010	4098-4118C	1249.07-1255.17	Kotcho	5		faunal inertinite
4102	4101-03C	1249.98-1250.59	Kotcho	1	bituminite (algal) low & medium Ro bitumens	faunal inertinite
4426	4426C	1349.04	Trout River	2-d	low & medium Ro bitumens	liptodetrinite, Tasmanales (mature)
4818	4818C	1468.53	Redknife	8	dispersed & pore-filling bitumens	liptodetrinite
5418	5409-27C	1648.66-1654.14	Fort Simpson	2-d/4	dispersed bitumen, bedding-//l brn bituminite & liptodetrinite	alginite
5587.3	5587.3C	1703.07	Fort Simpson	7/4		
5590.3	5590.3C	1703.92	Fort Simpson	8	amorphous medium Ro bitumen inclusions	bituminite
5899	5899C	1790.01	Fort Simpson	8	bitumens and bituminite	bituminite assoc alginite
6240	6240C	1901.95	Fort Simpson	5	medium Ro bitumens	
6400	6400C	1950.72	Fort Simpson	5	medium Ro bitumens	
6619	6614-24C	2017.47-2019	Fort Simpson	2-d	medium Ro bitumens	
6814	6814C	2076.91	Fort Simpson	4	bedding //l blk bituminite stringers assoc alginite	
6906	6902-6908C	2103.73-2105.55	Muskwa	3-4d	bituminite-micrinite matrix, medium & high Ro bitumens	bituminite-alginite
Section 2 - Dome et al. Trout Lake H-45 N60 44' 20" W121 22' 44"						
C186768-875	850-80	259.08-268.22	Cretaceous	4	matrix bituminite, liptodetrinite (algal), alginite	low & medium Ro bitumens
1250	1240-60	377.95-3840.48	Banff	4	Tasmanites, Leioshaeridiales liptodetrinite, bituminite	low & medium Ro bitumens; rare conodonts
1295	1290-1300	393.19-396.24	Exshaw	3/4	low Ro bitumens, bituminite-micrinite	algal bituminite, alginites (Tasman. Leiosp) liptodetrinite

Table 4 (cont.)
Organic petrographic composition

Sample no.[1,2]	Sampling interval[3]		Stratigraphic interval	Lithology[4]	Dominant maceral	Minor component
	ft	m				
1360	1340-80	408.43-420.62	Kotcho	3/4	matrix bituminite, bedding-//l (algal) bituminite, alginite	low & medium Ro bitumens, ?pellet bitumen
1730	1720-40	525.25-530.35	Kotcho	2-4d	bituminite-micrinite, bituminite, alginite	alginite (Leiosph., acritarchs) litpodetrinite, bitumens
2115	2101-20	640.38-646.17	Kotcho	4	bedding-//l bituminite(algal & micro-algal), liptodetrinite	alginite, acritarchs; rare bitumens
2570	2561-80	783.34-786.38	Redknife	2-d	brn bituminite wisps & specks	Tasmanales & ?Nostocopsis; rare bitumens
2800	2791-2810	850.69-856.49	Redknife	2-d	brn bituminite flecks, & stringers, granular bitumen\ite	
3020	3011-30	917.75-923.54	Redknife	2-d	abt brn bituminite stringers (alg), medium & low Ro bitumens	
3440	3431-50	1045.77-1051.56	Fort Simpson	2-d	dk brn-blk bituminite specks, stringers, micrinite	pore-filling bitumens
3870	3861-80	1176.83-1182.62	Fort Simpson	2-d	pervasive dk brn bituminite specks	pore-filling bitumens, & bitumen assoc. bituminite
4311	4301-20	1310.95-1316.74	Fort Simpson	2-d	dk brn bituminite flecks & stringers (Leiospaeridia?)	pore-filling and granular (low Ro type 3) bitumens
4630	4621-40	1408.48-1414.27	Fort Simpson	2-d	dk brn flecks & strings of algal bituminite (micro-, Leiosph.)	
4830	4821-40	1469.44-1475.23	Fort Simpson	2-d	pore-filling , medium Ro bitumen	dk brn bituminite (m'alg & liptinite debris), low Ro bitumens
4890	4881-4900	1487.73-1493.52	Muskwa	4-5d	blk matrix bituminite-micrinite, indigenous bitumens	
Section 3 - Murphy et al. Muskeg River No.1 N60 43' 38" W122 03' 45"						
C186767-685	671-700	204.52-213.36	Cretaceous	3/4	bedding-//l bituminite associated alginite	alginite, low Ro bitumen, trilete spores, chitin/fish scales
1655	1641-70	500.18-509.01	Cretaceous	4/3	bituminite, liptinites (alginite) and bedding-//l bitumens	
1915	1901-30	579.42-588.26	Banff	2/3	matrix bituminite-micrinite, bedding-//l algal bituminite	bedding \\l thin-walled alginite, colonial alginite & sporinite
2205	2191-2220	667.82-676.66	Banff	7/4	bedding \\l bituminite, alginite (thin-walled Tasmamites, micro)	
2335	2321-50	707.44-716.28	Banff		bituminite, bedding- //l alginite; microalginite	oxidation - no liptinite fluorescence
2370	2361-80	719.63-725.42	Exshaw		dark brn matrix bituminite-micrinite	microalginite, Tasmanites, low & med Ro bitumens
2440	2421-60	737.92-749.81	Kotcho	2/3	bedding-\\l brn bituminite, alginite, bitumens	
2690	2681-2700	817.69-822.96	Kotcho	2/3	bedding //l dk brn (algal) bituminite & Leiosphaeria	low and medium Ro bitumens
3060	3051-70	929.94-935.73	Kotcho	2-d	liptodetrinite-algal cysts, thin-walled alginite	low and medium Ro bitumens
3365	3351-80	1024.43-1030.22	Kotcho	2	bedding-//l dk brn (algal) bituminite	low and medium Ro bitumens
3720	3711-30	1131.11-1136.90	?Tetcho	2		
4030	4021-40	1225.6-1231.39	Redknife	2	rare bituminite (micro) flecks	rare bitumens
4430	4421-4440	1347.52-4440	Redknife	2	rare bituminite flecks	rare indigenous bitumens
4870	4861-90	1481.63-1490.47	Fort Simpson	2	bituminite associated w. litpodetrinite	medium & high Ro bitumens only
5275	5270-80	1606.29-1609.34	Fort Simpson	2-d	medium & high Ro bitumens	bituminite (liptodetrinite)
5765	5741-70	1749.85-1758.69	Fort Simpson	2	medium Ro pore-fill bitumens	bituminite (liptodetrininite)
6065	6051-80	1844.34-1853.18	Fort Simpson	2	dk brn-blk bituminite fom liptodetrinite	indigenous bitumens
6311	6301-20	1920.54-1926.34	Muskwa	4	blk matrix bituminite-micrinite;	
Section 4 Imperial Sun Arrowhead I-46 N60 50" W122 15						
C186757-1285	1285C*	391.67	Cretaceous'	4	bituminite-micrinite	micro-alginite, indigenous bitumens, ?vitrinite
1725	1710-40	521-530.52	Banff	8-d	bitumininite	indigenous bitumens

Table 4 (cont.)
Organic petrographic composition

Sample no.[1,2]	Sampling interval[3]		Stratigraphic interval	Lithology[4]	Dominant maceral	Minor component
	ft	m				
1810	1800-1820	548.64-554.74	Banfff	7		
1910	1900-1910	579.12-585.21	Banff	8	bituminite-liptinite	indigenous bitumens
1990	1980-2000	298.7-609.6	Exshaw	4-lam	matrix bituminite, alginite	low Ro bitumens;Tasmanites, Leiosphaeridia, micro-alginite
2510	2500-2520	762-768.1	Up. Devonian	5-d		
3010	3000-3020	9144-920.5	Up. Devonian	4/7	bituminite; residual/indigenous bitumens	
3510	3500-3520	1066.8-1072.9	Trout River	5		
4010	4000-4020	1219.2-1225.3	Redknife	5-d	indigenous bitumens	bituminite
4137	4137C*	1260.96	Jean Marie	1/2		
4640	4630-50	1411.22-1417.32	Fort Simpson	2	indigenous bitumens	bituminite
5160	5150-70	1569.72-1575.82	Fort Simpson	'5-8		
5510	5500-5020	1576.5-1682.5	Fort Simpson	5-d	indigenous bitumens,	low Ro bitumen associated with algal bituminite
6110	6100-6120	1859.28-1865.38	Muskwa	3-4-d	black & micritic bituminous matrix	indigenous bitumens, associated with carbonate crystals
6116	6116.4C*	1864.28	Muskwa	3-4-d	black & micritic bituminous matrix	indigenous bitumens, associated with carbonate crystals
6122	6122.25C*	1866.06	Muskwa	3-4-d	black & micritic bituminous matrix	indigenous bitumens, associated with carbonate crystals
6134	6134C*	1869.64	Muskwa	3-4-d	black & micritic bituminous matrix	indigenous bitumens, associated with carbonate crystals
Section 5 - Pan Am Home Signal Celibeta No. 7 N 60 09' 24.57" W 122 37' 43.82"						
C186765-930	921-40	280.72-286.51	Cretaceous	7/5	matrix bituminite, liptinite-bituminite	low & medium Ro bitumens
975	971-80	295.96-298.70	Fantasque	6-ph	(algal) liptinite-bituminite	medium & low Ro bitumens assoc pores , alginites
1045	1031-50	314.25-323.09	Formation F	6	liptinite-bituminite	medium & low Ro bitumens
1496	1495-97	455.67-1497	Formation F	4	liptinite (inc l. Leiosph)-bituminite, liptodetrinite	medium & low Ro bitumens
1730	1721-40	524.56-530.35	Prophet	4	High Ro bitumens, alg.litpinite-bituminite	low Ro bitumens
1850	1841-70	560.83-569.97	Prophet	5-d	(algal) bituminite in lenses	matrix bituminite; low & medium Ro bitumens
1931	1911-50	582.47-594.36	Clausen	2	matrix bituminite, algal bituminite, low Ro bitumen	faunal inertinite, high Ro bitumens
1991	1971-2010	600.76-612.65	Clausen	5	brn bituminite stringers, high Ro bitumen	algal liptodetrinite; medium & low Ro bitumens
2045	2021-50	616.00-624.84	Pekisko	5	(algal) bituminite,	low & medium Ro bitumens
2165	2151-80	665.62-664.46	Banff	4	(algal) bituminite, liptodetrinite , bitumens	low Ro & high Ro bitumens
2491	2471-2510	753.16-2510	Banff	4/5	matrix bituminite, bituminite stringers,alginite	tw alginite (Leiosph.), disp liptinite, bitumens
2920	2911-30	886.97-893.06	Banff	2	bituminite-liptodetrinite, thin-walled (?Leiosh.) alginite	low, medium & high Ro bitumens
3325	3311-40	1013.46-1018.03	Banff	4	liptodetrinite (algal cysts), algal bituminite	medium Ro bitumen
3430	3311-40	1009.19-1018.03	Banff	4	bedding-\\l (algal) bituminite; liptodetrinite, twalginite	low, medium & high Ro bitumens
3470	3451-90	1051.86-1063.75	Exshaw	4	dk brn matrix bituminite, low Ro bitumen	medium & high Ro bitumen; faunal inert, Tasmanales alginite
3655	3651-90	1112.82-1124.71	Kotcho	5/4	red/brn algal bituminite	low Ro bitumens assoc bituminite
3955	3941-70	1201-21-1210.56	Kotcho	5	low, medium & high Ro bitumens	?chitin
4325	4310-40	1313.68-1322.83	U Devonian	5	bituminites, bitumens	low and medium Ro bitumens
4505	4491-4520	1368.85-1377.69	Trout River	5	bituminites assoc liptodetrinite	medium and low Ro bitumen

Table 4 (cont.)
Organic petrographic composition

Sample no.[1,2]	Sampling interval[3]		Stratigraphic interval	Lithology[4]	Dominant maceral	Minor component
	ft	m				
4675	4661-4700	1420.67-1432.56	Redknife	5-7	bituminite (algal cysts)	medium Ro & granular (type 3) low Ro bitumens
4935	4921-90	1499.92-1520.95	Redknife	5-7	bituminite (algal cysts) assoc low Ro bitumen	medium & high Ro bitumens
5210	5191-5230	1581.91-1594.1	Redknife	5	bituminite-liptodetrintie, high Ro bitumens	rare low Ro bitumens
5455	5441-5470	1658.41-1667.26	Fort Simpson	2-d	fresh pyrite abt	bitumens and bituminite associated w. pyrite
5775	5761-90	1755.95-1765	Fort Simpson	2-d	medium & high Ro bitumens	
6145	6121-70	1865.68-1880.62	Fort Simpson	2-d	medium & high Ro bitumes	pervasive bituminite (micro-alginite)
6385	6371-6400	1941.88-1950.72	Fort Simpson	2-d	medium & high Ro bitumes	pervasive (algal) bituminite
6740	6721-6-	2048.56-2060.45	Ft.Simpson	2-d	bedding-//l (algal) bituminite, liptodetrinite	low & medium Ro bitumens
7060	7041-80	2146.09-2158	Muskwa	4	matrix bituminite	indigenous bitumens
Section 6 - Imperial Sun Netla C07 N60 46' 15" W122 46' 15"						
C186764-640	611-70	186.23-204.22	Cretaceous	4	matrix bituminite, dispersed bituminite II	low & medium Ro bitumens, alginite, chitin
1405	1391-1420	423.98-432.82	Cretaceous	5-8	dispersed liptinite (alginite)	low Ro bitumen assoc alginite
1840	1821-60	555.04-566.93	Cretaceous	5-8	dispersed alginite-bituminite	vitrinite, semifusinite, low & medium Ro bitumens
1955	1941-70	591-62-600-45	Banff	2-d/8	liptodetrinite, alginite	bitumen inclusions assoc. dolomite, medium Ro bitumen
2020	2001-40	591.62-621.79	Banff	2/4	bituminite, alginite (Leiosphaeridales,Tasmanites, micro-)	bitumens, chitin, spines
2040	2031-50	619.05-624.84	Exshaw	3	(algal?) bituminite, colonial and microalginite, ?pellets	low Ro bitumens (indigenous), chitin, bones/spines
2275	2261-90	289.15-697.99	Kotcho	3	dispersed (algal) bituminite	low & medium Ro bitumens
2680	2671-90	814.12-819.91	Kotcho	3/5	algal bituminite, Leiosphaeridia-type and micro algainite	low and medium Ro bitumens
2895	2881-2910	878.12-886.97	Kotcho	3/4	algal bituminite, Leioshaeridia-type alginite	low, medium and high Ro bitumens
3190	3161-3200	963.47-975.36	Kotcho	3	Leiosphaeridiaand coccoid alginite, algal bituminite	liptodetrinite, Tasmanites, chitin, ?bones, low Ro bitumens
3435	3411-60	1039.67-1054.61	Trout River	3	(algal) bituminite, alginite (Leiosphaeridiales), microalg	low & medium Ro bitumens, matrix bituminite,
3715	3701-40	1128.06-1139.95	Redknife	3-d	Algal bituminite, matrix bituminite, thin-waled & coccoidal alginite	low Ro bitumens associated w. bituminite
4145	4111-4140	1253.03-1261.87	Fort Simpson	7/8-d	low & medium Ro bitumens	alginite (Leiosphaeridia-type)
4515	4501-30	1371.90-1380.75	Fort Simpson	3/4	low & medium Ro bitumens	dolomitized alginite, algal bituminite
4815	4801-30	1463.35-1472.18	Fort Simpson	3/2-d	algal bituminites	low & medium Ro bitumens
5175	5161-90	1573.07-1581.91	Fort Simpson	5	medium Ro & high Ro bitumens	algal bituminite
5420	5411-30	1649.27-1655.06	Fort Simpson	5	medium Ro & high Ro bitumens	algal bituminite, low Ro bitumens
5971	5951-80	1813.86-1822.70	Fort Simpson	5	medium Ro & high Ro bitumens	low Ro bitumens , algal bituminite
6285	6271-6300	1911.40-1920.24	Muskwa	4-d	black matrix bituminite-micrinite (95%)	medium & high Ro bitumens
6315	6301-6330	1920.54-1929.38	Muskwa		black matrix bituminite-micrinite (95%)	medium Ro bitumens in micropores
Section 7 - Texaco NFA Bovie Lake J-72 N60 20' W122 45'						
C186762-745	741-750	225.86-228.6	Fort St John	5	Bituminite-micrinite	liptinite
1240	1231-50	375.2-381	Fantasque	1/3	Indigenous bitumens and bitumenite	alginite
1260	1251-70	'381.3-387.1	Mattson	4	Bituminous matrix and sporinite	ind.igenous bitumens, alginite, vitrinite

Table 4 (cont.)
Organic petrographic composition

Sample no.[1,2]	Sampling interval[3]		Stratigraphic interval	Lithology[4]	Dominant maceral	Minor component
	ft	m				
2665	2651-80	808.02-816.64	Prophet	5	Bituminite	alginite, sporinite
2935	2921-50	890.32-899.16	Prophet	1/5	bituminite, alginite	low Ro bitumen assoc alginite; lge colon alginite & Leiosphaeridiales
3290	3281-3300	1000-1005.84	Clausen	3/4/5		low Ro bitumens assoc bituminite
3390	3381-3900	1030.52-1188.72	Clausen	4	alginite-bituminite, low Ro bitumens	liptodetrinite
3645	3631-60	1106.73-1115.57	Banff	5	bituminite associated alginite, low Ro bitumen	liptodetrinite, microsporinite
3935	3921-50	1195.12-1203.96	Banff	5	bituminite, alginite, algal detrinite	low and med Ro bitumens
4335	4321-50	1317.04-1325.88	Banff	2/3/4	matrix bituminite, bituminite, alginite	indigenous bitumens
4835	4821-50	1469.44-1478.28	Banff	5	bituminite-micrinite	indigenous bitumens
5265	5251-80	1600.5-1609.34	Banff	3/4	matrix bituminite, bituminite	liptodetrinite, indigenous bitumens
5415	5401-30	1646.22-1655.06	Exshaw	3/4-d	matrix bituminite-micrinite	indigenous bitumens
5651	5611-90	1710.23-1734.31	Kotcho	2-d/3	bituminite III	
5845	5831-60	1777.29-1786.13	U Devonian	5-d	bituminite III	indigenous bitumens
5885	5881-90	1792.53-1795.27	U Devonian	3	bituminite III	rare bitumens
6405	6391-6420	1947.98-1956.82	U Devonian	5	indigenous bitumens in pores	bitumnite III (lenses and wisps)
6725	6711-40	2045.51-2054.35	Redknife	1/3	bitumens in carbonate	
6950	6941-60	2115.62-2121.41	Redknife	5/1	bituminite III	indigenous bitumens
7305	7291-7330	2222.29-2234.18	Fort Simpson	5	indigenous bitumens	bituminite III
7705	7681-7710	2341.17-2350	Fort Simpson	4	indigenous bitumens	
8855	8841-70	2694.73-2703.57	Fort Simpson	5	dispersed bituminite	
9470	9460-80	2883.48-2889.5	Fort Simpson	4	dispersed bituminite	black matrix-micrinite: formerly organic-rich source rock
9535	9531-40	2905.05-2907.79	Muskwa	4	bituminous matrix\micrinite, bituminite, high Ro bitumens	
9613.5	9597-9630C	2925.16-2935.22	Muskwa	4	bituminous matrix\micrinite, bituminite, high Ro bitumens	
9598	9598C	9598	Muskwa	4	bituminous matrix\micrinite, bituminite, high Ro bitumens	
9611	9611C	9611	Muskwa	4	bituminous matrix\micrinite, bituminite, high Ro bitumens	
Section 8 - B-A Texaco Arrowhead N-2 N60 31' 46" W123 01' 18"						
C-18675-655	650-660	198.12-201.17	Fort St John	2/3	type 4 bitumen, bituminite, alginite	
1325	1320-30	402.34-405.38	Fort St John	2/3	bituminite & alginites (dinoflagellates)	
2180	2170-90	661.42-667.51	Mattson	2	alginite, sporinite, associated bitumens	reworked vitrinite, semifusinite
2340	2330-50	710.18-716.28	Formation F	3-d/6-sp	bituminite > alginite	indigenous bitumens
2485	2480-90	755.90-758.95	Prophet	2	bituminite > alginite	indigenous bitumens
2645	2640-50	804.67-807.72	Clausen	5-d	liptodetrinite & alginite	indigenous bitumens and spores
2745	2740-50	530.35-838.2	Clausen		bituminite > alginite	indigenous bitumens
2805	2800-2810	853.44-856.49	Clausen	5-d	bituminite, liptodetrinite (algal)	indigenous bitumens
3245	3240-50	987.55-990.6	Banff	5-7-d	bituminite, liptodetrinite (algal)	indigenous bitumen, pyrobitumen

Table 4 (cont.)
Organic petrographic composition

Sample no.[1,2]	Sampling interval[3]		Stratigraphic interval	Lithology[4]	Dominant maceral	Minor component
	ft	m				
3505	3500-10	1066.8-1069.85	Banff	2	bituminite, alginite	indigenous bitumens
4005	4000-10	1220.73-1222.25	Banff	5-7	dispersed micro-alginite	indigenous bitumens
4285	4280-90	1304.54-1307.59	Banff	2	dispersed bituminite, alginite	Tasmanales, indigenous bitumens
4445	4440-50	1353.31-1356.36	Banff	4	matrix bituminite, micrinite, liptodetrinite	faunal inerts, indigenous bitumens
4455	4450-60	1356.36-1359.41	Banff	4	matrix bituminite, bituminite, micrinite	faunal inerts, fish scale
4635	4545-50	1385.32-1386.84	Exshaw	4	matrix bituminite > bituminite-micrinite, alginite	indigernous bitumen, algal detrinite
4645	4640-50	1414.27-1417.32	Exshaw	4	matrix bituminite-micrinite	faunal inerts, indigenous bitumens
4905	4900-10	1493.52-1496.57	Kotcho-U Dev.	5/6/3	bituminites, indenous bitumens	bituminite, indigenous bitumen
5205	5200-10	1584.96-1588.0	Kotcho-U Dev.	5-d	bituminites, indigenous bitumens	
5495	5490-5000	1673.35-1524	Kotcho-U Dev.	5	bituminite, indigenous bitumens	
5835	5830-40	1776.98-1780.03	Redknife	5-d	bituminite, indigenous bitumens	
6245	6240-50	1901.95-1905	Redknife	5-d	indigenous bitumens	bituminite
6595	6290-6600	1917.19-2011.68	Fort Simpson	5-d		indigenous bitumens, bituminite
7005	7000-10	2133.6-2136.65	Fort Simpson	5	indigenous bitumens	bituminite (micro)
7505	7500-10	2286-2289.05	Fort Simpson	6-7	bituminite //l bedding, indigeous bitumens	
8105	8100-8110	2468.88-2471.93	Fort Simpson	6-7		
Section 9 - Amoco East Flatt H-13 N60 32' 28" W123 17' 15"						
C186759-655	650-60	198.12-201.17	Fort St John	3-5		vitrinite, sporinite, indigenous bitumens
1050	1000-10	304.80-307.85	Fort St John	3	alginites > indigenous bitumens	vitrinite, litpodetrinite, indigenous bitumens
1440	1430-50	435.86-441.96	Flett-Meilleur	1/3/0	alginite, bituminite.	indigenous bitumens
1620	1610-30	490.72-496.82	Flett-Meilleur	1/3	bituminite	indigenous bitumens rare
1860	1850-70	563.88-569.98	Flett-Meilleur	3	alginite	liptodetrinite, indigenous bitumens
2445	2440-60	743.71-249.81	Prophet	6	alginite, bituminite	indigenous bitumens
2780	2770-90	844.30-850.34	Clausen	6/3	alginite, algal detrinite	indigenous bitumens
2905	2900-10	883.92-886.97	Clausen	1/5	bituminite	indigenous bitumens
Section 10 - IOE Bovie Lake M-05 N60 14' 46" W122 46' 39"						
C186753-1606	1603-09C*	488.59-490.42	Mattson	4	reworked sporinite, fresh sporinite,bituminite-micrite	Botryococcus alginite
1606.7	1606.7C*	489.72	Mattson	4	matrix bituminite-micrinite, sporinite,	alginite, microalginite, inertinite

[1]Section numbers according to Table 1
[2]Includes GSC curation numbers
[3]Denotes core samples
[4]Host lithology: 1 - carbonate; 2 - calc shale; 3- marl; 4 - carb shale; 5 - shale; 6 - cherty shale; 7 - carb siltstone; 8 - siltstone; 9 - coal

Table 5
Reflectance data

Sample no.	Sampling interval		Stratigraphic interval	%Reflectance					Bitumens														
				Vitrinite			Other macerals		Type 1			Low Ro Type 2			Type 3			Med Ro Type 4			Hi Ro			
																				Type 5			Type 6
	ft	m		mean	st dev	n	rew vitr mean	SFus spot	mean	st dev	n	mean	st dev	n	mean	st dev9	n	mean	st dev	n	mean	st dev	n	mean
Section 1 - Imperial Island River No.1																								
C186751-1994	1994C	607.77	Cretaceous	0.77	0.05	18		0.97				0.29	0.4	3	0.4	0.05	17	0.6	0.05	11				
2134	2134C	650.44	Banff	0.8	0.05	16	0.98					0.2	0.1	2	0.54	0.03	3				1.05	0.047	13	1.52
2140	2140C	652.27	Banff	0.82	0.01	4	1.16		0.16	0	2													1.57
2310	2310C	704.08	Banff				1.17					0.25	0	1				0.79	0.01	3	1.07	0.1	2	
2456	2456C	748.59	Banff									0.22	0	1							1.16	0.05	5	1.66
2747	2747C	837.28	Banff	0.96	0.04	2		1.62				0.24	0.01	2	0.56	0.03	6	0.86	0.08	6	1.14	0.04	3	
2760	2760C	841.24	Banff						0.11	0.01	2	0.35	0.01	2	0.62	0	1	0.86	0.05	10	1.09	0.07	6	
3012	3012C	918.06	Banff	0.91	0	1	1.02								0.54	0	1	0.86	0.04	3	1.21	0.12	3	1.7
3275	3275C	998.22	Banff									0.47	0.02	2	0.68	0	2	0.88	0.02	2	1.03	0.01	2	
3288	3288C	1002.18	Banff									0.47	0.04	2	0.68	0	2	0.88	0.02	2	1.02	0.02	2	
3465	3465C	1056.13	Exshaw						0.25	0.03	14	0.38	0.05	7	0.69	0.08	2	0.82	0.02	2	0.97	0.05	8	2.78
3470	3470	1057.66	Exshaw																					
3486	3486C	1057.65	Kotcho									0.45	0.03	2	0.62	0	1	0.85	0.05	6	1			
3797	3797-3806C	1157.32-1160.07	Kotcho						0.27	0	1	0.52	0.03	3	0.88	0.02	4	1.09	0.03	5	1.34	0.05	2	1.87
4010	4098-4118C	1249.07-1255.17	Kotcho									0.52	0.09	3				1.1	0.03	3	1.5	0	1	
4102	4101-03C	1249.98-1250.59	Kotcho																					
4426	4426C	1349.04	Trout River															1.11			1.64	0.05	2	
4818	4818C	1468.53	Redknife																					
5418	5409-27C	1648.66-1654.14	Fort Simpson									0.7	0.29	7	1.06	0.03	9	1.24	0.05	7	1.51	0.06	3	
5587.3	5587.3C	1703.07	Fort Simpson												0.97	0	1	1.32	0.04	6	1.6	0	1	1.82
5590.3	5590.3C	1703.92	Fort Simpson															1.37	0.1	6	1.62	0.11	3	2.14
5899	5899C	1790.01	Fort Simpson									0.7	0.1	8	1.13	0.13	15							
6240	6240C	1901.95	Fort Simpson									0.82	0.09	5	1.19	0.13	6	1.46	0.05	4	1.76	0.08	2	
6400	6400C	1950.72	Fort Simpson												1.28	0.03	4	1.5	0	1				
6619	6614-24C	2017.47-2019	Fort Simpson																					
6814	6814C	2076.91	Fort Simpson									1	0	1	1.31	0.07	4	1.57	0.02	2	1.87	0	1	
6906	6902-6908C	2103.73-2105.55	Muskwa												1.45	0.03	7	1.63	0.09	11	1.98	0.18	24	2.15
Section 2 - Dome et al. Trout Lake H-45																								
C186768-875	850-80	259.08-268.22	Cretaceous						0.19	0.01	11	0.33	0.13		0.35	0.04	3	0.55	0.03	3	0.90	0.02	3	
1250	1240-60	377.95-3840.48	Banff												0.32	0.02	4	0.81	0.05	11	1.44	0.03	6	1.89
1295	1290-1300	393.19-396.24	Exshaw						0.18	0.01	7	0.24	0.03	48	0.46	0.01	4				1.53	0.00	1	2.40

Table 5 (cont.)
Reflectance data

Sample no.	Sampling interval		Stratigraphic interval	%Reflectance					Bitumens															
				Vitrinite			Other macerals		Type 1			Low Ro Type 2			Type 3			Med Ro Type 4			Hi Ro			
																					Type 5			Type 6
	ft	m		mean	st dev	n	rew vitr mean	SFus spot	mean	st dev	n	mean	st dev	n	mean	st dev9	n	mean	st dev	n	mean	st dev	n	mean
1360	1340-80	408.43-420.62	Kotcho									0.39	0.00	1	0.48	0.04	2	0.71	0.04	2	0.95	0.05	1	2.53
1730	1720-40	525.25-530.35	Kotcho									0.34	0.00	1				0.80	0.00	1	1.19	0.02	2	1.57
2115	2101-20	640.38-646.17	Kotcho															1.07	0.00	1	1.39	0.00	1	1.61
2570	2561-80	783.34-786.38	Redknife															1.1	0.07	10	1.45	0.08	10	1.63
2800	2791-2810	850.69-856.49	Redknife																					
3020	3011-30	917.75-923.54	Redknife															1.27	0.05	6	1.53	0.09	6	1.85
3440	3431-50	1045.77-1051.56	Fort Simpson						0.16	0.00	1							1.29	0.06	6	1.60	0.22	13	2.15
3870	3861-80	1176.83-1182.62	Fort Simpson												1.11	0.00	1	1.37	0.08	6	1.90	0.11	7	
4311	4301-20	1310.95-1316.74	Fort Simpson												1.08	0.07	6	1.45	0.10	9	2.03	0.19	16	
4630	4621-40	1408.48-1414.27	Fort Simpson												1.08	0.12	4	1.43	0.11	23	2.12	0.30	17	
4830	4821-40	1469.44-1475.23	Fort Simpson												1.13	0.09	4	1.53	0.11	24	1.96	0.20	17	2.71
4890	4881-4900	1487.73-1493.52	Muskwa												1.17	0.10	28	1.54	0.10	24	1.89	0.05	6	
Section 3 - Murphy et al. Muskeg River No.1																								
C186767-685	671-700	204.52-213.36	retaceous	0.74	0.05	2	0.99		0.19	0.05	28	.37	0.05	15										
1655	1641-70	500.18-509.01	Cretaceous						0.22	0.01	2	0.39	0.05	17				0.63	0.02	5	0.98	0.08	10	
1915	1901-30	579.42-588.26	Banff	0.80	0.00	1		0.92	0.25	0.04	27	0.42	0.05	12										
2205	2191-2220	667.82-676.66	Banff						0.26	0.02	8				0.59	0.07	14	0.81	0.01	3	1.07	0.08	6	
2335	2321-50	707.44-716.28	Banff												0.53	0.04	3	0.86	0.05	9	1.06	0.07	3	2.00
2370	2361-80	719.63-725.42	Exshaw						0.23	0.04	3				0.57	0.05	7	0.86	0.06	2				1.53
2440	2421-60	737.92-749.81	Kotcho						0.22	0.04	5	0.46	0.05	11	0.68	0.03	5	0.85			1.29	0.02	3	1.72
2690	2681-2700	817.69-822.96	Kotcho						0.23	0.03	16	0.44	0.05	13	0.81	0.05	7	1.09	0.01	2				1.72
3060	3051-70	929.94-935.73	Kotcho						0.23	0.02	10	0.54	0.06	6	0.82	0.04	4	1.30	0.06	3	1.31	0.04	3	
3365	3351-80	1024.43-1030.22	Kotcho						0.31	0.06	15	0.58	0.02	7	0.79		1.24							
3720	3711-30	1131.11-1136.90	?Tetcho																					
4030	4021-40	1225.6-1231.39	Redknife									0.57	0.02	2	0.85	0.00	2	1.49	0.00	1				
4430	4421-4440	1347.52-4440	Redknife									0.58	0.00	2	1.09	0.07	9	1.35	0.08	12	1.78	0.10	7	2.10
4870	4861-90	1481.63-1490.47	Fort Simpson												1.15	0.12	19	1.61	0.10	19	1.96	0.16	19	
5275	5270-80	1606.29-1609.34	Fort Simpson												1.23	0.08	6	1.58	0.08	13	1.90	0.11	10	2.46
5765	5741-70	1749.85-1758.69	Fort Simpson												1.26	0.09	16	1.63	0.10	34	2.10	0.07	4	
6065	6051-80	1844.34-1853.18	Fort Simpson									1.08	0.05	3	1.32	0.08	12	1.65	0.13	17	2.05	0.06	3	2.43
6311	6301-20	1920.54-1926.34	Muskwa									1.08	0.08	7	1.32	0.07	10	1.71	0.08	11	2.20	0.16	6	3.29
Section 4 - Imperial Sun Arrowhead I-46																								
C186757-1285	1285C*	391.67	Cretaceous'		0.00	1			0.28	0.08	2	0.45	0.05	7	0.62	0.03	5							
1725	1710-40	521-530.52	Banff	n/d					0.21	0.11	8-d				0.82		3	1.18						2.10

Table 5 (cont.)
Reflectance data

Sample no.	Sampling interval		Stratigraphic interval	%Reflectance					Bitumens														
				Vitrinite			Other macerals		Type 1			Low Ro Type 2			Type 3			Med Ro Type 4			Hi Ro			
																					Type 5			Type 6
	ft	m		mean	st dev	n	rew vitr mean	SFus spot	mean	st dev	n	mean	st dev	n	mean	st dev9	n	mean	st dev	n	mean	st dev	n	mean
1810	1800-1820	548.64-554.74	Banfff	1.28			1.40								0.85	0.05	2	1.17			1.40			
1910	1900-1910	579.12-585.21	Banff	n/d								0.40	0.08	1	0.81	0.02	5				1.56	0.11	3	
1990	1980-2000	298.7-609.6	Exshaw	n/d					0.31	0.02	12	0.50	0.06	13	0.84	0.05	16	1.10	0.01	2	1.50			
2510	2500-2520	762-768.1	U Devonian														1.21	0.00	2	1.57	0.00	1	2.00	
3010	3000-3020	9144-920.5	U Devonian						0.38	0.01	2	0.59	0.09	5	0.85	0.08	2	1.32	0.08	3	1.50	0.00	1	
3510	3500-3520	1066.8-1072.9	Trout River						0.38	0.02	2	0.59	0.03	5	0.85	0.08	12	1.42	0.12	5		1.99		
4010	4000-4020	1219.2-1225.3	Redknife												0.84			1.49	0.04	8	1.75	0.04	5	
4137	4137C*	1260.96	Jean Marie																					
4640	4630-50	1411.22-1417.32	Fort Simpson												1.17	0.08	9	1.65	0.15	49	2.10	0.13	12	
5160	5150-70	1569.72-1575.82	Fort Simpson												1.37		1	1.53			2.10		1	
5510	5500-5020	1576.5-1682.5	Fort Simpson															1.58	0.14	15	2.10	0.15	17	
6110	6100-6120	1859.28-1865.38	Muskwa															1.67	0.14	14	2.20	0.00	1	
6116	6116.4C*	1864.28	Muskwa															1.60	0.16	29	2.10	0.12	25	
6122	6122.25C*	1866.06	Muskwa												1.25	0.07	4	1.67	0.16	31	2.10	0.13	51	
6134	6134C*	1869.64	Muskwa						0.77		1				1.40	0.00	1	1.70	0.13	30	2.10	0.10	24	
6424	6424.5C*	1958.19	Slave Point												1.40	0.00	1	1.68	0.09	4	2.20	0.20	31	
6439	6439C*	1962.61	Slave Point															1.75	0.10	13	2.15	0.13	45	2.50
6544	6544.25C*	1994.69	Slave Point																					
6673	6673C*	2033.93	Slave Point															1.85	0.11	4	2.20	0.16	18	2.75
6837	6837C*	2083.92	M. Dev									1.83	0.06	9	1.83	0.06	9	2.17	0.13	28	2.52	0.11	11	
6839	6839.3C*	2084.63	M. Dev									1.85	0.14	3	1.85	0.14	3	2.12	0.11	3	2.61	0.16	30	
Section 5 - Pan Am Home Signal Ceilbeta No. 7																								
C186765-930	921-40	280.72-286.51	Cretaceous	0.81	0.00	1						0.33	0.06	4	0.52	0.00	1	0.62	0.00	1				
975	971-80	295.96-298.70	Fantasque									0.31	0.00	1	0.53	0.00	0.02				1.00			
1045	1031-50	314.25-323.09	Formation F						0.25	0.02	3				0.55	0.10	3		0.00	1				
1496	1495-97	455.67-1497	Formation F									0.42	0.08	2	0.64	0.01	3	0.78	0.00	1	1.00	0.10	3	
1730	1721-40	524.56-530.35	Prophet						0.25	0.00	1				0.66	0.04	6	0.82	0.04	2	1.10	0.00	1	
1850	1841-70	560.83-569.97	Prophet												0.57	0.00					1.20	0.00	1	
1931	1911-50	582.47-594.36	Clausen												0.64	0.06	5	0.88	0.06	2	1.30	0.00	1	1.80
1991	1971-2010	600.76-612.65	Clausen												0.68	0.05	2	0.88+						
2045	2021-50	616.00-624.84	Pekisko												0.55									
2165	2151-80	665.62-664.46	Banff									0.48			0.65	0.03	3	1.12	0.11	6	1.46	0.03	4	1.70
2491	2471-2510	753.16-2510	Banff												0.74	0.06	6	1.13	0.04	2	1.47	0.07	6	1.97
2920	2911-30	886.97-893.06	Banff						0.37	0.00	1				0.76	0.10	6				1.50	0.08	4	

Table 5 (cont.)
Reflectance data

Sample no.	Sampling interval		Stratigraphic interval	%Reflectance					Bitumens															
				Vitrinite			Other macerals		Type 1			Low Ro Type 2			Type 3			Med Ro Type 4			Hi Ro			
																					Type 5			Type 6
	ft	m		mean	st dev	n	rew vitr mean	SFus spot	mean	st dev	n	mean	st dev	n	mean	st dev9	n	mean	st dev	n	mean	st dev	n	mean
3325	3311-40	1013.46-1018.03	Banff						0.29	0.00	1				0.89	0.00	1	1.15	0.08	6				1.97
3430	3311-40	1009.19-1018.03	Banff									0.68	0.00	1	0.88	0.00	12	1.37	0.38	10	1.55	0.10	5	2.11
3470	3451-90	1051.86-1063.75	Exshaw						0.36	0.04	3	0.58	0.08	15	0.88	0.07	4	1.25	0.14	17	1.60	0.17	4	1.91
3655	3651-90	1112.82-1124.71	Kotcho						0.34	0.03	3	0.56	0.00	1	0.86	0.04	6	1.30	0.10	5	1.60	0.05	5	1.87
3955	3941-70	1201-21-1210.56	Kotcho						0.45	0.05	2	0.62	0.00	1				1.30	0.04	2				2.02
4325	4310-40	1313.68-1322.83	U Devonian						0.48	0.07	2	0.58	0.00	1				1.32	0.05	3	1.62	0.01	2	
4505	4491-4520	1368.85-1377.69	Trout R.									0.62	0.00	1	1.18	0.10	4	1.54	0.04	3	1.80			2.20
4675	4661-4700	1420.67-1432.56	Redknife									0.75	0.13	3				1.58	0.11	8	1.99	0.10	6	
4935	4921-90	1499.92-1520.95	Redknife									0.72	0.00	1				1.88	0.08	4				
5210	5191-5230	1581.91-1594.1	Redknife												1.22	0.00	1	1.65	0.01	5	2.10	0.00	1	
5455	5441-5470	1658.41-1667.26	Fort Simpson												1.20	0.12	[illegible]	1.71	0.08	3	2.06	0.12	11	3.20
5775	5761-90	1755.95-1765	Fort Simpson												1.16	0.00	1				2.76	0.12	4	3.60
6145	6121-70	1865.68-1880.62	Fort Simpson												1.25	0.16	2	1.90	0.02	19	2.60	0.18	10	3.25
6385	6371-6400	1941.88-1950.72	Fort Simpson												1.24	0.08	2	2.20	0.11	4	2.65	0.15	2	3.25
6740	6721-6-	2048.56-2060.45	Fort Simpson												1.29	0.17	2	1.91	0.15	15	2.52	0.19	14	3.27
7060	7041-60	2146.09-2158	Muskwa												1.26	0.07	2	2.00	0.25	26	2.60	0.37	2	
Section 6 - Imperial Sun Netla C07																								
C186764-640	611-70	186.23-204.22	Cretaceous	0.75	0.15	4	1.00		0.14	0.03	4	0.24	0.01	2	2			0.58	0.02	2	1.00	0.00	1	
1405	1391-1420	423.98-432.82	Cretaceous																					
1840	1821-60	555.04-566.93	Cretaceous	0.74	0.01	2	0.85					0.22	0.02	2					0.04	5				
1955	1941-70	591-62-600-45	Banff						0.17	0.00	1	0.26	0.04	3				0.60	0.06	9				
2020	2001-40	591.62-621.79	Banff						0.13	0.00	1	0.38	0.09	14	0.52	0.05	4	0.79	0.05	2	1.20	0.00	1	
2040	2031-50	619.05-624.84	Exshaw						0.13	0.03	14	0.42	0.05	10	0.65	0.00	1	0.81	0.07	7				
2275	2261-90	289.15-697.99	Kotcho*						0.13	0.01	2	0.37	0.09	3				0.92	0.03	3	1.20	0.03	2	
2680	2671-90	814.12-819.91	Kotcho*						0.28	0.03	1	0.35	0.06	6	0.67	0.05	14	0.86	0.02	3	1.10			
2895	2881-2910	878.12-886.97	Kotcho*					chitin	0.22	0.00	1	0.37	0.02	4	0.54	0.07	12	0.83	0.06	3	1.20	0.09	6	
3190	3161-3200	963.47-975.36	Kotcho*					chitin	0.18	0.12	2				0.46	0.07	5							
3435	3411-60	1039.67-1054.61	Trout River						0.22	0.80	2				0.55	0.06	13	0.90	0.07	16	1.20	0.00	1	
3715	3701-40	1128.06-1139.95	Redknife						0.22	0.00	1	0.42	0.07	7	0.80	0.00	1	1.00	0.09	7	1.53	0.05	2	
4145	4111-4140	1253.03-1261.87	Fort Simpson						0.27	0.07	2	0.45	0.08	11	0.82	0.03	2	1.04	0.11	14	1.50	0.09	2	1.90
4515	4501-30	1371.90-1380.75	Fort Simpson									0.58	0.06	3	0.82	0.04	2	1.25	0.08	16	1.48	0.06	8	1.92
4815	4801-30	1463.35-1472.18	Fort Simpson									0.67	0.00	1	0.86	0.04	4	1.30	0.09	12	1.58	0.07	2	1.86
5175	5161-90	1573.07-1581.91	Fort Simpson									0.67	0.02	2	0.88	0.00	1	1.39	0.08	5	1.61	0.03	2	2.20
5420	5411-30	1649.27-1655.06	Fort Simpson									0.61	0.00	1				1.42	0.11	15	1.62	0.04	5	2.10

Table 5 (cont.)
Reflectance data

Sample no.	Sampling interval		Stratigraphic interval	%Reflectance					Bitumens														
				Vitrinite			Other macerals		Type 1			Low Ro Type 2			Type 3			Med Ro Type 4			Hi Ro			
																					Type 5			Type 6
	ft	m		mean	st dev	n	rew vitr mean	SFus spot	mean	st dev	n	mean	st dev	n	mean	st dev9	n	mean	st dev	n	mean	st dev	n	mean
5971	5951-80	1813.86-1822.70	Fort Simpson												1.00	0.18	2	1.62	0.12	18	1.89	0.04	8	2.20
6285	6271-6300	1911.40-1920.24	Muskwa												1.16	0.07	7	1.69	0.03	12	2.00	0.00	1	2.00
6315	6301-6330	1920.54-1929.38	Muskwa												1.23	0.15	38	1.67	0.10	15	2.10	0.17	3	2.27
7210	7201-7220	2194.87-2200.65	Headless																					
Section 7 - Texaco NFA Bovie Lake J-72																								
C186762-745	741-750	225.86-228.6	Fort St John																					
1240	1231-50	375.2-381	Fantasque	0.81					0.29	0.04	36	0.48	0.04	3	0.66	0.04	3							
1260	1251-70	381.3-387.1	Mattson	0.79	0.00	2	?		0.33	0.06	7	0.42	0.00	1	0.64	0.07	2							
2665	2651-80	808.02-816.64	Prophet																					
2935	2921-50	890.32-899.16	Prophet						0.35	0.07	7										1.00	0.00	1	
3290	3281-3300	1000-1005.84	Clausen						0.38	0.04	10	0.56	0.04	6							1.20	0.00	1	
3390	3381-3900	1030.52-1188.72	Clausen						0.34	0.07	6	0.57			0.69			0.88	0.00	1				
3645	3631-60	1106.73-1115.57	Banff						0.35	0.05	20	0.56	0.05	7							1.10	0.00	1	
3935	3921-50	1195.12-1203.96	Banff						0.41	0.03	4	0.61	0.04	4	0.74	0.01	3							
4335	4321-50	1317.04-1325.88	Banff						0.33	0.02	5	0.66			0.78	0.00	1				1.30			
4835	4821-50	1469.44-1478.28	Banff									0.70	0.08	3				1.09	0.16	2	1.35	0.00	1	
5265	5251-80	1600.5-1609.34	Banff															1.01	0.06	6	1.31	0.03	2	
5415	5401-30	1646.22-1655.08	Exshaw									0.59	0.08	8	0.77	0.03	4	1.08	0.08	8	1.52	0.04	3	1.80
5651	5611-90	1710.23-1734.31	Kotcho						0.57	0.02	2	0.77	0.00	1	1.08	0.19	6	1.46	0.02	2				
5845	5831-60	1777.29-1786.13	U Devonian									0.82	0.00	1	1.06	0.00	1	1.63	0.14	2	1.63	0.14	2	
5885	5881-90	1792.53-1795.27	U Devonian									0.80	0.00	1							1.70	0.00	1	
6405	6391-6420	1947.98-1956.82	U Devonian									0.85	0.09	4	1.15	0.00	1	1.55	0.12	8	1.93			
6725	6711-40	2045.51-2054.35	Redknife									0.96	0.07	9	1.16	0.05	4	1.63	0.17	5				
6950	6941-60	2115.62-2121.41	Redknife									0.98	0.04	2				1.61	0.07	11	2.00	0.10	2	
7305	7291-7330	2222.29-2234.18	Fort Simpson									0.98	0.04	2				1.86	0.05	4	2.20	0.18	19	
7705	7681-7710	2341.17-2350	Fort Simpson									1.10	0.10	2				1.82	0.12	16	2.25	0.08	12	
8855	8841-70	2694.73-2703.57	Fort Simpson												1.50	0.16	7	2.40	0.23	26	3.30	0.24	8	
9470	9460-80	2883.48-2889.5	Fort Simpson												1.54	0.16	3	2.95	0.31	17	4.10	0.28	13	
9535	9531-40	2905.05-2907.79	Muskwa												2.02	0.14	23	2.90	0.14	46	4.40	0.23	5	
9613.5	9597-9630C	2925.16-2935.22	Muskwa												2.02	0.15	14	3.08	0.28	50				
9598	9598C	9598	Muskwa																					
9611	9611C	9611	Muskwa																					
Section 8 - B-A Texaco Arrowhead N-2																								
C186758-655	650-660	198.12-201.17	Fort St John																					

Table 5 (cont.)
Reflectance data

Sample no.	Sampling interval		Stratigraphic interval	%Reflectance					Bitumens															
				Vitrinite			Other macerals		Type 1			Low Ro Type 2			Type 3			Med Ro Type 4			Hi Ro			
	ft	m		mean	st dev	n	rew vitr mean	SFus spot	mean	st dev	n	mean	st dev	n	mean	st dev9	n	mean	st dev	n	Type 5			Type 6
																					mean	st dev	n	mean
1325	1320-30	402.34-405.38	Fort St John						0.20															
1805	1800-10	548.64-551.68	Fort St John																					
2180	2170-90	661.42-667.51	Mattson																					
2340	2330-50	710.18-716.28	Form F						0.26	0.04	8	0.33	0.01	6	0.54	0.02	3	0.76	0.01	6	1.10	0.16	3	
2485	2480-90	755.90-758.95	Prophet						0.25	0.03	8	0.39	0.05	5	0.60	0.03	5	0.75	0.02	2	1.02	0.16	2	
2645	2640-50	804.67-807.72	Clausen												0.60	0.00	1				1.23	0.00	1	
2745	2740-50	530.35-838.2	Clausen									0.44	0.10	5				0.77	0.02	2	1.20	0.00	1	
2805	2800-2810	853.44-856.49	Clausen						0.25	0.01	2	0.35	0.01	2				0.77	0.07	4				
3245	3240-50	987.55-990.6	Banff																					
3505	3500-10	1066.8-1069.85	Banff						0.19	0.05	8	0.32	0.07	2				0.99	0.06	4	1.28	0.00	1	
4005	4000-10	1220.73-1222.25	Banff									0.37	0.11	5	0.84	0.00	1	1.00	0.07	3				
4285	4280-90	1304.54-1307.59	Banff									0.37	0.11	5				0.96	0.05	4	1.20	0.00	1	
4445	4440-50	1353.31-1356.36	Banff									0.52	0.09	3	0.84	0.04	2	0.94	0.06	8				
4455	4450-60	1356.36-1359.41	Banff									0.58	0.03	2	0.85	0.03	2	1.00	0.08	21	1.76	0.20	10	2.08
4635	4545-50	1385.32-1386.84	Exshaw						0.37	0	1	0.5	0.04	10	0.85	0.13	19	1.07	0.09	14				
4645	4640-50	1414.27-1417.32	Exshaw									0.58	0.07	16	0.86	0.02	19	1.05	0.08	5	1.80	0.08	5	
4905	4900-10	1493.52-1496.57	Kot-U Dev												1.03	0.04	5	1.28	0.05	4	1.54	0.08	3	
5205	5200-10	1584.96-1588.0	Kot-U Dev						0.52	0	1	0.82	0	1	1.13	0.05	4	1.42	0.07	5	1.67	0.15	5	
5495	5490-5000	1673.35-1524	Kot-Up. Dev									0.76	0.08	2	1.04	0.06	2	1.43	0.09	5	1.76	0.18	7	
5835	5830-40	1776.98-1780.03	Redknife									0.78	0.08	2	1.21	0.08	2	1.53	0.05	3	1.74	0.12	3	
6245	6240-50	1901.95-1905	Redknife															1.63	0.00	1	2.01	0.13	16	2.27
6595	6290-6600	1917.19-2011.68	Fort Simpson																					
7005	7000-10	2133.6-2136.65	Fort Simpson												1.27	0.05	2	1.63	0.13	16	2.09	0.12		
7505	7500-10	2286-2289.05	Fort Simpson									1	0.04	3	1.27	0.09	4	1.70	0.20	4	1.97	0.12	4	2.3
8105	8100-8110	2468.88-2471.93	Fort Simpson												1.36	0.08	4	1.72	0.11	8	2.1	0.16	10	2.27
Section 9 - Amoco East Flett H-13																								
C186759-655	650-60	198.12-201.17	Fort St John	0.64	n\a	1						0.17	n\a	1				0.33	0.00	1	1.00	0.00	1	
1050	1000-10	304.80-307.85	Fort St John	0.78	n\a	1	1.08	1.18				0.16	0.04	5				0.48	0.05	5	0.88	0.04	4	
1440	1430-50	435.86-441.96	Flett-Meilleur									0.27	0.04	51				0.46	0.06	42	0.89	0.00	1	1.31
1620	1610-30	490.72-496.82	Flett-Meilleur									0.27	0.05	6				0.50	0.11	6	1.06	0.11	7	
1860	1850-70	563.88-569.98	Flett-Meilleur									0.27	0.03	5				0.50	0.12	3	0.93	0.08	4	
2445	2440-60	743.71-249.81	Prophet									0.28	0.06	8				0.50	0.03	2	1.09	0.16	4	
2780	2770-90	844.30-850.34	Clausen									0.25	0.06	5				0.61	0.09	3	0.86	0.02	2	
2905	2900-10	883.92-886.97	Clausen									0.26	0.01	3				0.71	0.00	1	0.89	0.07	4	

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